

OIB - HU-25C Guardian 09/25/15 Science Report

Aircraft:

[HU-25A Guardian #525](#) ([See full schedule](#))

Date:

Friday, September 25, 2015

Mission:

OIB

Mission Location:

Thule, Greenland

Mission Summary:

Mission: Northwest Coastal B (priority: low)

This mission completes the southernmost portions of the Northwest Coastal A mission flown in Spring 2015, and supplements these lines with the two lower-most lines from the Northwest Coastal B mission last flown in 2014. These

Weather today was almost ideal for this mission, with easterly (and thus downsloping and hence drying) flow at Thule and along the upper Baffin Bay coast for several hundred miles to the south. Skies were almost perfectly clear for the entire flight, with the exception of isolated cirrus clouds near the southern end of the line which obscured our science instruments for only a few minutes. Last night's satellite images and synoptic forecasts for today had led us to believe that some clearing was taking place in the Lincoln Sea, and we had hoped to fly our first sea ice mission today. But this morning's weather satellite images showed only one narrow patch of clear skies in the Lincoln Sea, and we expected this to move too far east to be of help.

After yesterday's flight, the ATM team decided to make a small modification to the ATM T5 transceiver, with the goal of eliminating the occasional problems we have seen with "dirty" transmit pulse waveforms, particularly on yesterday's flight. This modification took some time this morning and delayed our takeoff by about one hour, but it had the desired effect of cleaning up the transmit pulse waveform. The ATM performed well today as a result. The modification also changed the calibration of the ATM transceiver, and we conducted several ramp passes today to assist in re-calibrating the instrument. We also plan to perform ground calibration procedures over the weekend, in order to fully "dial-in" the instrument. These post-flight calibrations will be applied to the data we collect during this flight, and thus we expect to release good-quality ATM data for today's flight.

We flew the majority of the flight at 31,000' MSL, and the instruments performed well at that altitude. We had hoped to fly at 35,000' MSL to obtain better range performance from the aircraft, but were refused clearance to do so because of air traffic.

DMS and the FLIR camera performed well.

We conducted ramp passes at 20,000', 10,000' and 5000' MSL.

Data volumes:

DMS: 20 Gb

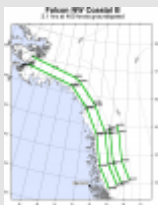
Narrow Swath ATM: 21 Gb

FLIR: 1.8 Gb

total data collection time: 3.6 hrs

Images:

Map of Falcon - Northwest Coastal B



[Read more](#)

Melt ponds



[Read more](#)

Linkswiler and Fraim



[Read more](#)

Upernavik Ice Stream complex



[Read more](#)

Submitted by:

John Sonntag on 09/26/15

Related Flight Report:

HU-25C Guardian 09/25/15

Flight Number:

OIB2015 Arctic Northwest Coastal B

Payload Configuration:

ATM & DMS

Nav Data Collected:

No

Total Flight Time:

3.8 hours

Comments:

OIB completed the NW Coastal B flight plan today. Boxtop has arrived at Thule so the runway will be open tomorrow (Saturday, September 26) for their mission. OIB is taking advantage of this rare weekend airfield ops at Thule and planning for a science flight tomorrow afternoon.

Submitted by:

Luci Crittenden on 09/25/15

Flight Segments:

From:	BGTL	To:	BGTL
Start:	09/25/15 12:03 Z	Finish:	09/25/15 15:51 Z
Flight Time:	3.8 hours		
Log Number:	15F005	PI:	John Woods
Funding Source:	Thomas Wagner - NASA - SMD - ESD Cryosphere & International Polar Year		
Purpose of Flight:	Science		

Flight Hour Summary:

	15F005	16F002
Flight Hours Approved in SOFRS	100	

Flight Hours Previously Approved				67.4	
Total Used				32.6	65.3
Total Remaining				2.1	
16F002 Flight Reports					
Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining
10/05/15	OIB2015 Arctic Sea Ice Central	Science	3.6	3.6	63.8
10/05/15	OIB2015 Arctic Sea Ice East	Science	3.8	7.4	60
10/06/15	OIB2015 Arctic Ice-Sat2 North	Science	4	11.4	56
10/07/15	OIB2015 Arctic Transit Thule to Kangerlussuaq	Transit	2	13.4	54
10/08/15	OIB2015 Arctic Southwest Coastal A	Science	3.8	17.2	50.2
10/08/15	OIB2015 Arctic Thomas-Jakobshavn 01	Science	3.7	20.9	46.5
10/09/15	OIB2015 Arctic Umanaq B	Science	3.9	24.8	42.6
10/13/15	OIB2015 Arctic Jakobshavn Equip Store	Science	2.9	27.7	39.7
10/13/15	OIB2015 Arctic Southeast Coastal A	Science	3.6	31.3	36.1
10/18/15	OIB2015 Arctic Southeast Coastal B	Science	4.1	35.4	32
10/19/15	OIB2015 Arctic Helheim-Kangerdlugussuaq	Science	3.7	39.1	28.3
10/19/15	OIB2015 Arctic Helheim-Kangerdlugussuaq Gap B	Science	3.9	43	24.4
10/20/15	OIB2015 Arctic Jakobshavn Mop-Up	Science	3.7	46.7	20.7
10/20/15	OIB2015 Arctic Southwest Coastal B	Science	3.7	50.4	17
10/21/15	OIB2015 Arctic Southwest Coastal C	Science	3.4	53.8	13.6
10/21/15	OIB2015 Arctic K-EGIG-Summit	Science	3.7	57.5	9.9
10/22/15	OIB2015 Arctic Mopup South	Science	2	59.5	7.9
10/22/15	OIB2015 Arctic Ferry BGSF-CYYR	Ferry	2.2	61.7	5.7
10/23/15	OIB2015 Arctic Ferry CYYR-KRIC	Ferry	3.3	65	2.4
10/23/15	OIB2015 Arctic Ferry CYYR-KRIC	Ferry	0.3	65.3	2.1

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Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.

15F005 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining
09/15/15	OIB #1	Check	2.7	2.7	97.3
09/20/15	OIB #2, 3, 4	Ferry	2.7	5.4	94.6
09/21/15	OIB #2, 3, 4	Ferry	2.3	7.7	92.3
09/21/15	OIB #2, 3, 4	Ferry	2	9.7	90.3
09/23/15	OIB2015 Arctic North Central Gap 02	Science	3.9	13.6	86.4
09/24/15	OIB2015 Arctic Northwest Coastal A	Science	3.7	17.3	82.7
09/25/15	OIB2015 Arctic Northwest Coastal B	Science	3.8	21.1	78.9
09/28/15	OIB2015 Arctic Sea Ice West	Science	3.7	24.8	75.2
09/30/15	OIB2015 Arctic North Central Gap 01	Science	3.9	28.7	71.3
09/30/15	OIB2015 Arctic Zachariae-79N	Science	3.9	32.6	67.4